

Walden

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THE SOUTHERN AGRICULTURIST.

(NEW SERIES.)

Vol. III.

FOR JULY, 1843.

No. 7.

ON THE CULTIVATION OF RICE.

The following Report of the Committee on the Cultivation of Rice, was read before the State Agricultural Society of South-Carolina, at their annual meeting in December, 1842; and is re-published from the *Planter*, by request.

RICE, for which grain we are indebted to the East-Indies, has been cultivated as a staple in the tide-water districts of this State for upwards of a century. At first, the inland swamps were planted, but as these, after four or five years, became grassy, and required too much labor, they were gradually neglected, and at length entirely abandoned for the more easily managed and equally fertile swamp-lands on the rivers, which were covered by the flood-tide and drained on the ebb. The annual product of these lands was at first very great, being often times seeded broad-cast the first year, and yielding, without the use of the hoe, 50 to 80 bushels of rough rice to the acre.

It was estimated in those days, (toward the close of the last century,) to be worth one acre of land, to clear and prepare for planting another.

The seed, (about 2 bushels to the acre,) was sowed in trenches some 14 or 15 inches apart,* and covered with earth—the land was then flowed long enough to swell the grain and sprout it, after which it was dried until the plant should make its appearance in the needle state. The water was then again applied, with the triple view to stimulate the young plants and bring them up nearly together, to destroy any young grass which might have vegetated and to secure it from the depredation of birds until the grain should be some what exhausted. This was called the "Point flow." A few days after the land became dry again, the rice was usually strong enough to bear the hoe. One or two hoeings, as time and the labor at command would allow, were then given, and the water again put on for 12 to 18 days. This, which was called the "long water," greatly stimulated the growth of the plant, and served to kill all the young grass which the hoe could not reach, and, if judiciously applied, generally left the field entirely bare of grass.

* Sometimes 17 inches.

When the land was again dry, it was broken with the hoe once or twice as circumstances might permit. The joint roots were now put out; and the plant, in a flourishing, growing state, while "jointing" was at a stage to receive the water once more, and it remained flowed till the grain was sufficiently matured for harvest.

The same space of time to mature a crop of rice, is required now as was then, but the process of planting is materially changed, instead of being covered with earth as formerly, (and as is still practised by some planters who are strong-handed,) the seed, after being rolled in a watery solution of tenacious red clay, and suffered to dry, is sown in an open trench,* and, without any covering of earth, the water is put on and there retained until the grain is nearly exhausted, when the young plant is green and will bear exposure to the sun. After which the old process of culture is in general pursued, except that in the last, "farewell," or harvest watering, the water, instead of being left to stagnate as formerly, is changed as often as the tides will allow—which practice contributes to the health of both the plant and the neighborhood.

Within the last ten years, the "water culture" has been more systematically and extensively used. According to this method† the water is not drawn from the field after planting till the expiration of 60 days, (at first, 40 days was the term, and by some, this term is still preferred,) except only to be refreshed by the returning tide, and to give root to the plant.‡ After an interval of 30 days or thereabout, during which the land is hoed once or twice, the water is again put on for the last time—always about the time of "jointing," in which stage the plant is usually found in the space of 90 days.

Indeed so aquatic is the rice-plant that good crops have been made from fields which had not been dried from the time of planting to the time of harvesting. Fifty bushels of rough-rice to the acre is considered a good average crop, for a given term of years, on land of good quality in a good pitch of tide. Five acres of such land to each hand, with one acre of provisions (if the plough be used on the upland, two acres of provision land,) is believed to be the relative proportion of land to labor. Although, small tracts of choice land have been priced at \$250 and even \$300 per acre, yet the average value of rice-swamp now does not exceed \$200, may and be set down more properly at \$150. Like good Bank-stock, it is

* For the process of "claying" rice to prevent its floating when the field is flowed immediately after planting, we are indebted to the close observation and experiments of Capt. John H. Allston, who invented it while planting on Santee in 1826. It is a decided improvement and saves in the process of seeding the land, the labor of near half the disposable force.

† The perfecting of this system is due to Mr. A. Liggett, of Georgetown District, planting on the Pee Dee.

‡ It is worthy of remark, *en passant*, that Rice which has been sprouted under water over, does not take permanent root until the atmosphere has access to it.

convertible into money at nearly the same rate, at the close of any given number of years, having yielded in the mean time a greater or less interest according to the skill and judgment with which it has been managed.

By the most considerate men and intelligent planters, it is now deemed an advantage to have under bank a little more land than one's laboring force can readily cultivate year by year, in order to introduce a system of dry fallow, if not of rotation of crop, which recent experience has proved to be of much value in restoring the energies of the soil, and preserving it in a sound and productive condition.

This system, as introduced and practised in the District of Georgetown, may be thus noticed.

It is many years since the rice-lands of the Waccamaw, the Pee Dee and the Wee Nee, those deep soiled tide-water bottoms, supposed to be among the best in the rice growing region, were observed to be deteriorating somewhat by unintermitted culture, and they have yielded in consequence, crops less abundant in quantity, though still prime in quality and equally certain annually. The smaller planters, together with such overseers as were just setting up as planters on their own account, resorted to the uncleared lands less favorably located higher up the rivers, rating greatly cheaper in price; where a small capital with diligent labor, directed by their own vigilant energies and practised skill would ensure, in favorable seasons, results equal and sometimes superior to those obtained from the choicest old lands in the best pitch of tide.

At length, these new lands were for the most part appropriated, and some of them were found exhibiting symptoms of exhaustion, from continued heavy cropping. It was perceived by observant and forecasting men, that a resource would be needed, in the course of not many years, more for these very lands, which wore away faster, than for those in a better pitch of tide.

About this time, namely in the year 1834-5, when the minds of practical planters were tending in this direction, a very worthy resident of Waccamaw died, leaving a handsome estate, heavily encumbered with debt. Negroes were depreciating in the market—the Asiatic Cholera, so terrible in its ravages, was making steady progress towards us—the land, though well situated in a good pitch of tide, was for the most part old and much worn.

In view of all these circumstances, the executors of this estate determined to sell one half the negroes, and pay off as much of the debt as possible with the proceeds of the sale. To operate to the best advantage with laboring force, now reduced over one half, the 270 acres of rice-land previously cultivated, were thus disposed of—50 acres were thrown out altogether—60 acres reserved for the mill-pond, and 160 selected for cultivation. Of this body of land, only 100 acres were planted in rice the first year, the remaining 60 acres were thrown out for the season, kept dry, and suffered to

remain untouched until the middle of July, between "hoeing and harvest" when the crops of rice and corn were laid by and peas and slips had been planted. Then these 60 acres received attention for the first time—the spademen cleaned out the ditches and drains, and the women mowed down the long grass which was just about seeding, together with the crop (more or less polluting all old plantations) of volunteer rice, which, cut down now, could not mature again. As early after frost as practicable, these fields were broken up with the plough, then flowed the greater part of the winter, and when trenched in the spring for planting, the soil was light and friable, and in the highest tilth desirable.

In the succeeding year, the fields thus prepared, were planted with great advantage, and other 60 of the 100 acres in cultivation the year previous, were thrown out, to be treated after the same method, and so on, until the whole being thoroughly thus prepared and rested a year, the quantity of grass was greatly diminished, and the ensuing culture become so much lighter, that a greater quantity of land was with ease planted to the same number of hands. The crops of rice having been improved in both quantity per acre, and quality, the estate is now very much relieved of its debt, and the system which was at first introduced at the suggestion of pressing necessity, is now pursued of choice, as the very best which has been devised for resuscitating tide-water lands, exhausted by successive heavy cropping and polluted with "volunteer rice."

The old plan of resting land was an easy one to practice—and it was a proper one for the time, when new land was abundant. When a field became so much worn, or so contaminated with either grass-seed or red-rice, as not to reward sufficiently the labor bestowed on its culture, it was abandoned, and new land was cleared and planted in its stead. The field abandoned and laying out did indeed improve by the annual decomposition of the immense growth of weeds produced on it, consolidated and converted into soil by the deposit of sediment from the tides flowing and ebbing without hindrance, by the destruction of grass seed, volunteer rice, &c. But when, after some 10 or 12 years, it was desirable to reclaim it, the banks were found broken in many places, the trunks washed up, and the whole surface thickly covered with an acid coat of tough, undecayed vegetable matter, all of which required a great deal of both time and labor to reduce it to a state fit for cultivation. Whereas, the system of fallowing above described, and now practised, requires only the foregoing intermission of one crop out of four, or more according to the recuperative powers of the natural soil. The field simply is not planted, the banks and trunks are preserved entire, the water is excluded, (except at very high spring tides, endangering the bank,) a crop of weeds, grass and volunteer rice succeeds, which is either mowed down, pastured, or left to be burned off in winter, as one's

time and labor will allow. The ditches and drains are cleaned out in July or August, and all the rusty, red grains of rice, which had been lying dormant in the mud for years, when thrown out and exposed to the fructifying influence of the sun, vegetate, and are utterly destroyed by the frost long before the time for planting the next crop. And all this is done by the ordinary laboring force in one season. No portion of the negroes is sent into the woods after "cooper stuff," (as formerly,) and thereby subjected to the temptation of killing the neighbors' cattle and hogs. The "cooper stuff" is purchased of citizens residing in a better timbered region, higher up the rivers, who make a business of getting it for market. The field is cultivated in rice the year after, and yields an increase, regarding the quantity and quality of the grain, and the labor bestowed in making it, fully repaying the planter for the loss of one year's product.

In the year 1839, at the plantation of the undersigned on Pee Dee, he had two fields which he desired to put in order for a full crop. No. 4, a field of eighteen acres, was trenched in the month of February, between the stubble, and sowed down in oats* which yielded in June, about two flat-loads in the sheaf—these were fed away to stock. The other, (No. 3,) a field of sixteen acres, was partially broken up with a single horse plough, in the month of May, for the purpose of destroying weeds, together with the first coarse grasses; it was then pastured by ten head of cattle, and twelve head of sheep, which were fattened and kept fat, 'till taken away in September, when the dews became heavy and cold. The ditches in both fields were cleansed in the month of August early. The surface was turned early in the ensuing winter, and the crop from them, the succeeding year, notwithstanding the drowning freshet, which in June destroyed or injured so much rice, was decidedly increased in quantity, and greatly superior in quality. It was a clean crop too, having required, comparatively, little labor to cultivate it.

In the year following, (1840,) he had at this place thirty acres, and at another plantation on Waccamaw, sixty acres of rice-land under fallow. A portion cultivated in oats, succeeded by peas, and the remainder pastured by all sorts of stock with much advantage.

Every year since, this system has been pursued on his plantation to a greater or less extent. It is also pursued by Dr. Heriot, a member of this Committee, Col. Ward, Capt. John H. Allston and others, with uniform success. The Committee trust that these gentlemen and others, who have planted with success, will be induced to furnish to the Society, their valuable experience on the subject. Col. Ward is now planting a rice remarkable for the

* Oats of a very large grain, for the seed of which he was indebted to a friend and neighbor, John H. Tucker, Esq.

size and beauty of the grain, which commands in the market from 15 to 20 per centum more per cwt. than prime rice of the ordinary kind.

The seed was discovered some years since on his plantation, and he has been nursing it with great care from year to year.

It is understood that in 1844, he will have the seed in market. Mean time it is hoped that he will furnish to this Society, samples of the same, together with a memoir of the discovery of this grain, and the manner in which he perserved it.

Respectfully submitted,

R. F. W. ALLSTON.

Chairman.

DESCRIPTION OF THE CORN MOTH.

(*Tinea granella*.) Among the insects most injurious in their attacks on grain, when laid up in magazines, is the larva of this small moth (the mottled woolen moth of Hawarth,) the caterpillar of which is also called in England the white corn worm. The perfect moth measures, from the head to the tips of the wings, six or seven lines. The insect appears in that country as a moth in May, June, and July. It frequents granaries and other buildings where grain is stored, sits at rest in the day-time, and only flies about at night. It is in the summer months, from May to August, and sometimes in September, that the larvæ devour the different sorts of grain; and they attack rye, oats, and barley, with the same zest as wheat. From September to May the larvæ is sought for in vain in the corn heaps; it has retired into the cracks and fissures of the floor and walls, and moreover has concealed itself in its cocoon. It does not reappear till April or May, and then in a very different form; namely, as a moth, which flutters about the heaps of store-corn, and deposits upon them the invisible germ of future destruction. After a few days have elapsed, small whitish worm maggots, or more properly speaking larvæ, proceed from the eggs, and immediately penetrate into the grain, carefully closing up the opening with their white roundish excrement, which they glue together by a fine web.

"The European grain-moth (*Tinea granella*.) in its perfected state, is," says Dr. Harris, "a winged insect, between three and four-tenths of an inch. It has a whitish tuft on its forehead; its long and narrow wings cover its back like a sloping roof, are a little turned up behind, and are edged with a wide fringe. Its fore-wings are glossy like satin, and are marbled with white or gray, light brown, and dark brown or blackish spots, and there is always one dark square spot near the middle of the outer edge. Its hind wings are blackish. Some of these winged moths appear in May, others in July and August, at which times they lay their eggs; for there are two broods of them in the course of the year.

The young from the first laid eggs come to their growth and finish their transformations in six weeks or two months; the others live through the winter, and turn to winged moths in the following spring. The young moth-worms do not burrow into the grain, as has been asserted by some writers, who seem to have confounded them with the Angoumois grain-worm; but, as soon as they are hatched, they begin to gnaw the grain and cover themselves with the fragments, which they line with a silken web. As they increase in size they fasten together several grains, with their webs, so as to make a larger cavity, wherein they live. After a while, becoming uneasy, in their confined habitations, they come out, and wander over the grain, spinning their threads as they go, till they have found a suitable place wherein to make their cocoons. Thus, wheat, rye, barley, and oats, all of which they attack, will be found full of lumps of grains cemented together by these corn-worms, as they are sometimes called; and when they are very numerous, the whole surface of the grain in the bin will be covered with a thick crust of webs and of adhering grains. These destructive corn-worms are really soft and naked caterpillars, of a cylindrical shape, tapering a little at each end, and are provided with sixteen legs, the first three pairs of which are conical and jointed, and the others fleshy and wart-like. When fully grown, they measure four or five-tenths of an inch in length, and are of a light ochre or buff colour, with a reddish head. When about six weeks old they leave the grain, and get into cracks, or around the sides of corn-bins, and each one then makes itself a little oval pod or cocoon, about as large as a grain of wheat. The insects of the first brood, as before said, come out of their cocoons, in the winged form in July and August, and lay their eggs for another brood: the others remain unchanged in their cocoons, through the winter, and take the chrysalis form in March or April following. Three weeks afterwards, the shining brown chrysalis forces itself part way out of the cocoon, by the help of some little sharp points on its tail, and bursts open at the other end, so as to allow the moth therein confined to come forth.

"The foregoing account will probably enable the readers of this essay to determine whether these destructive insects are found in our own country. From various statements deficient however in exactness, that have appeared in some of our agricultural journals, I am led to think that this corn-moth, or an insect, exactly like it in its habits, prevails in all parts of the country, and that it has generally been mistaken for the grain-weevil, which it far surpasses in its devastations. Many years ago I remember to have seen oats and shelled corn (maize) affected as above described, and have observed seed-corn, hanging in the ears, to have been attacked by insects of this kind, the empty chrysalids of which remained sticking between the kernels; but, for some time past no opportunity for further investigation has offered itself.

"There is another grain-moth, which, at various times, has been found to be more destructive in granaries, in some provinces of France, than the preceding kind. It is the Angoumois moth (*Anacampsis? cerealella*.) The winged moths of this group have only two visible feelers, and these are generally long, slender, and curved over their heads. Their narrow wings mostly overlap each other, and cover their backs horizontally when shut. The Angoumois grain moth probably belongs to the modern genus *Anacampsis*, a word derived from the Greek, and signifying recurved, in allusion to the direction of the feelers of the moths. In the year 1769, Colonel Landon Carter, of Sabine Hall, Virginia, communicated to the American Philosophical Society at Philadelphia, some interesting 'observations concerning the fly-weevil that destroys wheat.' These were printed in the first volume of the 'Transactions' of the Society, and were followed by some remarks on the subject by "the Committee of Husbandry." It is highly probable that this fly-weevil is no other than the destructive Angoumois grain moth; for Colonel Carter's account of it, though deficient in some particulars, agrees essentially with what has been published respecting the European insect. Mr. E. C. Herrick has recently sent to me, from New Haven, Connecticut, some wheat, that has been eaten by the moths precisely in the same way as grain is attacked by the Angoumois grain moth; and a gentleman to whom this moth-eaten wheat was shown, informed me that he had seen grain thus affected in Maine. Unfortunately the insects contained in this wheat were dead when received, having perished in the chrysalis state; had they lived to finish their transformations, I have good reason to think that they would have proved to be identical with the Angoumois moths. The following particulars respecting the latter are chiefly gathered from Reaumur's "Memoires," and from a work by Duhamel du Monceau and Tillet, who were commissioned by the Academy of Sciences of Paris, in the year 1760, to inquire into the nature of the insect, on account of its ravages in Angoumois, a part of France where it had long been known, and had multiplied to an alarming extent. The Angoumois moth, or *Anacampsis cerealella*, in its perfected state, is a four-winged insect, about three-eighths of an inch long, when its wings are shut. It has a pair of tapering curved feelers, turned over its head. Its upper wings are narrow, of a light brown colour, without spots, and have the lustre of satin; they cover the body horizontally above, but droop a little at the sides. The lower wings and the rest of the body are ash-coloured. This moth lays its eggs, which vary in number from sixty to ninety, in clusters, on the ears of wheat, rye and barley, most often while these plants are growing in the field, and the ears are young and tender; sometimes also on stored grain in the autumn. Hence it appears that they breed twice a year; the insects from the eggs laid in the early part of the summer, coming to perfection and

providing for another brood of moth-worms in the autumn. The little worm-like caterpillars, as soon as they are hatched, disperse, and each one selects a single grain, into which it burrows immediately at the most tender part, and remains concealed therein after the grain is harvested. It devours the mealy substance within the hull; and this destruction goes on so secretly, that it can only be detected by the softness of the grain or the loss of its weight. When fully grown, this caterpillar is not more than one-fifth of an inch long. It is of a white colour, with a brownish head; and it has six small jointed legs, and ten extremely small wart-like prop-legs. Duhamel has represented it as having two little horns just behind the head, and two short bristles at the end of its tapering body. Having eaten out the heart of the grain, which is just enough for all its wants, it spins a silken web or curtain to divide the hollow, lengthwise, into two unequal parts, the smaller containing the rejected fragments of its food, and the larger cavity serving instead of a cocoon, wherein the insect undergoes its transformations. Before turning to a chrysalis it gnaws a small hole, nearly or quite through the hull, and sometimes also through the chaffy covering of the grain, through which it can make its escape easily when it becomes a winged moth. The insects of the first, or summer brood, come to maturity in about three weeks, remain but a short time in the autumn, and at this time may be found, in the evening, in great numbers, laying their eggs on the grain stored in barns and granaries. The moth-worms of the second brood remain in the grain through the winter, and do not change to winged insects till the following summer, when they come out, fly into the fields in the night, and lay their eggs on the young ears of the growing grain. When damaged grain is sown, it comes up very thin; the infected kernels never sprout, but the insects lodged in them remain alive, finish their transformations in the field, and in due time come out of the ground in the winged form.

"It has been proved by experience that the ravages of the two kinds of grain-moths, whose history has been now given, can be effectually checked by drying the damaged grain in an oven or kiln; and that heat of one hundred and sixty-seven degrees, by Fahrenheit's thermometer, continued during twelve hours, will kill the insects in all their forms. Indeed, the heat may be reduced to one hundred and four degrees, with the same effect, but the grain must then be exposed to it for the space of two days. The other means, that have been employed for the preservation of grain from these destructive moths, it is unnecessary to describe; they are probably well known to most of our farmers and millers, and are rarely so effectual as the process above mentioned."—(*Harris's Treatise on Insects.*)

From these considerations, the means which the agriculturist must employ to secure his grain from so dangerous an enemy, are clearly deducible. First of all, the lofts, before the corn is placed in them, must be carefully examined, and the cocoons, if any are

discovered, got rid of. Sprinkling the floor with a mixture of strong white wine vinegar and salt, before laying up the corn, is strongly to be recommended. Sweeping the floor and walls thoroughly should not be neglected; and the dust should be removed immediately, in order that the larvæ may not find their way back into the corn-heaps. Common salt will also purify the infested grain. One of the surest remedies appears to be a free ventilation, by means of an artificial degree of cold, as the larvæ can only live in a temperature of 55° to 60° of Fahr. Bats and spiders are the principal natural enemies of the corn-moth, and some small birds also feed on them, See GRAIN WEEVIL. (*Treatise on insects, &c.* by J. and M. Loudon.)

For the Southern Agriculturist.

ON THE MANAGEMENT OF A PLANTATION.

In reply to Queries addressed to several Gentlemen interested in Agricultural Pursuits;

By W. B.

Upper Three Runs, September 8th, 1842.

DEAR SIR,—Pursuant to your request, I now beg leave to submit the following as my mode of preparing lands, planting and tillage.

Early in each January, I usually commence breaking up or turning over my lands, ploughing my fallow land first; this is done with what is called an Allen plough, with one or two horses or mules to the plough, according to the stiffness or lightness of the soil. The breaking is thus continued until about the last week in February, when some ploughs are stopped from breaking, and put to laying off the fields or cuts, (as the several divisions in a plantation are usually termed,) four and a half feet wide, if intended for one stalk in a hill; if intended for two stalks in a hill, I give, or lay off five and a half feet distance, this is continued until about the first week in March, when I usually commence planting corn, laying off the other at right angles—the distance as described above; and dropping about twice as many grains as stalks intended to be left in a hill, covering it deep, to guard it against frosts that may yet come, and the crows and birds after it comes up; if a good stand is not obtained, replanting is immediately attended to; for all practical planters are well aware, that late replanted corn scarcely ever bears. Breaking land, laying off, and planting, is thus continued, if the seasons are favorable, until done, which is commonly in April; except, perhaps, some low or new ground, which is usu-

ally planted in the month of May. However, it ought to have been remarked, that about the last week in March, the land intended for cotton, which has already been broken up, is commenced being prepared by listing; or, as the common phrase is, throwing three furrows together with Allen ploughs, which make a large loose bed; two furrows will answer, if it is done by experienced hands, otherwise the rows will be of an unequal width, this is continued until about the first week in April, when cotton planting is commenced; this is done by splitting the bed made by the Allen ploughs with Scooter ploughs, then sowing the seed and covering them with boards screwed on to Scooter stocks, about a foot long and eight or ten inches wide, with a triangular notch cut in the lower edge of the board, the covering can be done thus as fast as a horse or mule can walk: two hands to drop for one coverer is about equal work. Ridging or listing, and planting, is thus continued until done, which brings us to the last of April; replanting is attended to as usual, until a good stand is obtained, if possible. We have now done, we will suppose, planting corn and cotton, except, perhaps, some low or new lands, which is planted subsequently, as an opportunity may offer; we now, about this time (first of May) commence ploughing corn, if dry weather, it is ploughed with scraper ploughs, two or three times in a row, according to the width; it is thinned at the same time to its proper stand: say, if four and a half feet wide, one stalk; if five feet and a half wide, two stalks; we at the same time give our corn a light working with the hoe, especially that portion of it which has been manured. With scraper ploughs, we usually plough our corn and cotton the first time, if the weather is dry, otherwise with the Allen plough; we also, about this time, (10th or 15th of May) commence hoeing our cotton, and thinning it to near a proper stand at the commencement, and this will bring us to about the 20th or last of June. If the rows are three feet wide, we leave one stalk in a place twelve inches apart, if four feet wide, eighteen inches is not too wide, and so in proportion to the strength of the soil. About the 15th or 25th of May, we go over our corn the first time, thinning it to its proper stand the first working. We now commence ploughing it the second time;—this ploughing is done deep and close, planting peas at the same time, by dropping them in the first or second

furrow from the corn, covering them with the plough; *this ploughing, must by all means, be done deep and well, otherwise a full crop cannot be expected on common land*; the finishing furrow may be made with scraper ploughs, which is a saving of labor, as one furrow will answer where it would take two, with an ordinary plough. The second ploughing will occupy us until the 10th or 20th of June, when we usually commence giving our corn the last working, or laying by, for we scarcely ever plough our corn more than three times; this last working is done with scraper ploughs if dry weather, and very light with any kind of ploughs, for we hold and believe, that there is more corn ruined by deep and wide injudicious ploughing the last time, than there are by droughts; the roots ought not to be disturbed when the corn is shooting and tasseling, for it is at this time, that it requires all the strength it can gather from the surrounding earth.

About the 1st of July, we commence working our cotton the second time, ploughing it with scraper ploughs, and drawing earth to it as its strength will bear, seeing that it has not been left too thick in the first hoeing, and thinning out properly; the succeeding or third ploughing is done commonly with Allen ploughs, by throwing a considerable bed to the cotton; this ploughing is followed by the hoe hands, by drawing moderately to the cotton; if necessary, it is scraped over again very lightly, and laid by.

Our fodder now calls us away from the cotton field to attend to it.

In the foregoing I have not stated the number of acres which is allowed to the hand. I will now state that about 18 acres is about an average to the hand*, in some land 20 acres can be as easily cultivated as 10 or 12 in other places.

Before I close, I beg leave to state one fact, which will prove the utility of deep working or breaking. Some twenty or twenty-five years ago, I became owner of an old wash-worn out barren plantation, so that I made no calculations on raising anything of worth on it, giving attention to the culture of lands much fresher; however, I commenced with the old field by breaking it up as deep as I could, and have continued to do so almost every year to the present time; it is of a red foundation, and where it lies level, not

* I usually divide my hands into two classes, plough and hoe hands—each class about equal in number.

subject to wash; the soil is deep, and it produces corn and cotton finely, much better than when I commenced planting it, twenty or twenty-five years ago.

Respectfully submitted,

W. B.

For the Southern Agriculturist.

ANALYSIS OF SOILS.

Analysis of soil from the Stock Farm of Col. R. F. W. Allston, of Georgetown, S. C.

Water of absorption, lost by heating, at	-	300°	5.000
Additional loss by heating to redness, until all the organic matter was dissipated. This loss is principally to be set down to vegetable matter, (humus) although some portion of it must also have consisted of water; while, traces of nitrogenised matter were likewise detected in the ammoniacal gas, which escaped during the ignition,			8.900
Silica, chiefly in the form of white sand,	-	-	80.744
Alumina,	-	-	3.714
Peroxide of Iron,	-	-	1.230
			99.588
Carbonate of Lime, with traces of Carbonate of Magnesia and loss,			.412
			100.000

This soil is remarkable for the large quantity of organic matter it contains, and at the same time, for the almost total absence of saline matter, (if we except the small contents of carbonate of lime and magnesia.) It was only after operating upon at least four ounces of the soil, that the slightest trace of phosphate of magnesia could be detected. No nitrates, and scarcely a trace of (sulphur) or sulphuric acid could be found; and what is very uncommon, only traces of chloride of calcium (muriate of lime) were present.

The humus was found to be largely soluble in carbonate of soda.

One hundred parts of the dry soil, on being thoroughly wetted, weighed one hundred and sixty-three.

Without having been apprised of any particulars relative to this soil, I should say, that it would be benefited by being burnt over, and dressed with lime or marl. Cow-pen litter could also greatly improve such a soil, by furnishing to it the requisite salts.

CHARLES UPHAM SHEPARD.

Charleston, April 4, 1843.

CORN FODDER.

Our readers will remember that we said much last season upon sowing corn for fodder. We thought well of this crop then, and we continue to think well of it yet. Upon land in good tilth, we suppose that usually nearly or quite 30 tons, undried, can be obtained per acre. When dried, it is probably reduced to one fourth of its weight when green. But even then the result is large; for 7 or 8 tons per acre of stalks, so small and good that cattle will consume them without waste, is a large product. Such stalks, well cured, the cattle ate much more freely, and this too without much waste, in our barn the last winter, than they did the stalks upon which corn had ripened—though these latter were as well cured and as good flavored, apparently, as any that we ever handled.

But corn fodder generally will be less grown for winter feeding than for summer and early autumn. At the time in August and September, when the pastures are very liable to be short, the corn fodder works in very advantageously. No other growth that we have any acquaintance with, does so well. Those farmers, therefore, whose pastures are peculiarly liable to be pinched by drought, will do well to *sow* corn, and to sow some early, that it may be in readiness for use as soon as the pastures grow short.

The best course of procedure is not yet settled. Some prefer sowing broadcast and cutting with the scythe. The labor required by this method is small. But *our* lands would become very weedy if thus left without tillage through the summer. Though the work be more, we sow in drills, and work with hoe and cultivator. Thus we keep down the weeds and give the soil the benefit that comes from string. Whether we gain or lose, comparatively, by so much labor, we are not able to say.

Sow some corn quite soon; and then at intervals of ten days or a fortnight, sow more; and continue to do this up to the 20th of June or the first of July.

What variety of corn is best for this purpose? Mr. Asa M. Holt, of Connecticut, has in part answered this question in the subjoined communication. He is right, we think, in preferring nothern corn to southern. The cattle do like the stalks of the nothern best, and will waste less of them. But among the nothern corns there is

much variety, both as to the sweetness and the *hardness* of stalks. The sweet corns have a sweeter tasting stalk than others, and generally their stalk is not hard and brittle. Of the various kinds that we have used, the Tuscarora furnishes the best stalk, but there is the same trouble attending it which Mr. Holt finds with what he calls the *tall sugar*, viz: that it very often fails to vegetate. We much wish that some accurate experiments might be made with the several varieties, and that analyses of them might be furnished.

From what we have experienced as to their relative brittleness when we have been binding up the stalks, we infer that the different varieties, take up quite different quantities of silicates, and probably they may of other matters. As a general rule, we think the *harder* and more brittle the stalk, the less the cattle like it. Among all the varieties of nothern corn that we have worked much upon, the Red Blaze has the most brittle and the poorest stalk.

We shall be glad to hear from any of our correspondents upon this subject of corn fodder.

Mr. Holt's letter is as follows:

Green Corn Fodder.

MR. EDITOR—I recollect that some time since, you asked for information about the relative value of the different varieties of corn for green fodder. To this inquiry I then meant to give you an answer at the first leisure hour, but a pressure of other buisness and cares, has prevented my doing it till this time. I hasten to give you the following sketch, which should have been more complete in its details, if I could have found more time to perfect it.

For a considerable number of years past, I have been in the habit of sowing corn for green fodder. And some half dozen years ago, I published in the New England Farmer, a communication on the subject, stating something of the amount of crop, &c. Up to that time, and since that time, till the last season, I sowed the tall southern horse-tooth corn, both because it made the greatest amount of stalks, and because the stalks continued green longer than the stalks of the nothern corn, before they ripened or dried up. And once I paid a seed dealer two dollars per bushel for that kind of corn for seed, when I might have had nothern corn at less than half that price, because the horse-tooth corn made so much the largest *amount* of crop. I had usually let the horse-tooth corn stand till it was 6 or 7 feet high, and nearly ready to tassel out, before I cut it. In this condition we cut and fed it out. My horse and cow ate it greedily for the first day or two. After this, they generally seemed unwilling to eat much of any thing more than the leaves, and usually left all, or nearly all of the stalks, and seemed unwilling to eat them. With this kind of keeping, my horse did buisness rather better than he did on *dry* hay, and just about as well as he did on *green* hay, or grass which was fed out to him.

as soon as it was cut. But with either of these kinds of food, he always wanted grain to enable him to do much business.

The last season, I was *so lucky* as not to be able to procure the tall southern corn for sowing, and consequently sowed one of the varieties of northern flint corn. Unluckily, we had used up most of our manure, before we prepared the ground for the corn, and the amount of the crop was consequently very small in bulk, when compared with what we usually obtained by sowing the southern corn with a plenty of manure. But when we fed out the green stalks which grew from the northern corn, we thought *their* value was greater than the value of the crop of southern corn which usually grew on the same spot when it was well manured. And last season, when I began to cut my green corn fodder, which had grown from northern corn, I gave it to my horse without any grain, and he generally ate up every particle which was given him—leaves, stalks and all, without leaving a bit, and he continued to eat it clean without wasting any of it. And what was still more pleasing, I found that he was more active, and gained more flesh, without grain, when fed with the stalks grown from northern corn, than I ever had a horse gain, when fed on stalks which grew from the southern corn, with 4 to 6 quarts of oats daily into the bargain.

My oldest son has made a number of trials to see whether there is any perceptible difference in the taste of the juice of the stalks of the different kinds of corn; and he says among the kinds which he has tried, he finds that the stalks of the sugar corn, afford much the sweetest juice, and that the stalks of the tall southern corn afford a smaller amount of sweetness in their juice, than any other kind which he has tasted. This fact seems important, and well worth the attention of all those who attempt to make sugar or molasses from cornstalks.

I do not mean to encourage the expectation of a good crop of green corn fodder from poor and exhausted land without manure. But last year from northern corn, and with very little manure, we had a more valuable crop, though a smaller one, than we have usually had from the same spot, when well manured, and sowed with southern corn—consequently, when I again sow corn for fodder, I intend, by all means, to sow northern corn, and I should greatly prefer the *tall* sugar corn to all other sorts with which I am acquainted, were it not for the fact that the sugar corn is very apt to fail of vegetating.

In haste, yours, respectfully,

ASA M. HOLT.

East Haddam, Conn, May 1, 1843.

[N. E. Farmer.]

Warts on the udder and teats of Cows, may be removed by washing them in a strong solution of alum and water.

Laudanum is said to be a cure for cholera in horses, by administering half an ounce.

For the Southern Agriculturist.

COTTON BAGGING.

To the Planting Interest of South-Carolina, on the manufacture of *Cotton Bagging*, from inferior Cotton.

DURING a recent journey to the southwest, I travelled with a gentleman, whose sagacity, information and practical experience, appear but as hand-maids to his usefulness and philanthropy.

The conversation turning on the condition of the Southern States, on the Atlantic, growing cotton; it was observed, that the desideratum at present of much importance, would be to manufacture with our inferior qualities of cotton, our own cotton bagging. The low price obtained for cotton, made this economy indispensable—also from our inability to compete, or keep pace with the richer soils of the southwest, where quantity compensated for price, from there being no chance in the scheme of compensations, in the administration of government, or acts of Congress, of receiving any equivalent—or any equivalent from the States that are now protected in the manufacture of bagging. Every view of the subject shewing the necessity of great economy, as far as South-Carolina is concerned, and this branch of industry deserves immediate and strict attention.

My companion, who is an old and respectable merchant, and extensive ship-owner, has devoted some reflection to the subject I now bring before your country readers. As a cotton buyer, he says, he would prefer to purchase cotton packed in such domestic bagging, as can be easily manufactured in the State where cotton is produced, to that packed in hemp bagging, either Foreign or American. This preference is given, because it is less liable to damage than hemp bagging, which from exposure is constantly apt to rot.

But this preference is given, provided care and skill are used to give the bagging made of cotton proper strength. This can be done, by attention in the first place, in making a *clean pure warp or chain, free from defect and strong*—this part of the manufacture requiring most of the attention. The *thread* to be made about the same as that of the hemp bagging, and the square yard to weigh also about the same.

The additional advantage to which particular attention is invited, is, *to the filling or woof*, which requires less labor than that usually bestowed on it, *being only twisted sufficiently, as not to be broken by the shuttle*; for this the most inferior cotton will answer, and the bagging thus made, will be found to resist the wear and tear to which it is always subjected, and most of all, from the iron hooks used by the laborers—the tenacity or elasticity from the manner recommended, being greater than that of the bagging in use.

This is the result of experiment. As a large ship owner for many years, the attention of my friend was turned, consistently with his interest, to examine and test the various specimens of sail cloth, so as to select the choicest kind of that necessary outlay for ships. In this examination, English, American, French, Russian and Dutch were tested; the last was found to resist time and friction, and superior to the rest; and in looking to the cause of its superior usefulness, it was at once seen, that while the greatest care in the manufacture was given to the chain or warp, the filling or woof was *loosely* put in, precisely as is now recommended to those who are willing to manufacture bagging after this manner; and from this statement, it appears obvious that the same results will advantageously follow the mode above detailed.

The cost of machinery it is said, cannot exceed \$1500, to those who enter into it exclusively as a business; but to the planter who is in the habit of manufacturing his domestic cloth, the additional expense to what is so provided, will not be much.

It is out of place here to shew, that our small and suffering State pays about four per cent. on value of the cotton crop, to Foreign countries and to Kentucky; for the greatest part of which she receives no equivalent whatever, in the shape even of barter; and for which she pays in gold and silver, or its equivalent. If, from three to four hundred thousand dollars, so paid annually, can be saved by domestic industry, it becomes highly necessary to make the effort.

CAROLINA.

Wounds and Bruises on Horses.—Take one quarter of a pound of saltpetre, half a pint of vinegar, half a pint of spirits of turpentine; put them together in a bottle, and shake up before using. Apply it to the wound with a feather, three times a day.

SCRAPING COTTON.

We ask our cotton planters to beat the following work done on the plantation of A. K. Montgomery, Esq., on 14 mile creek, Mr. J. Hamilton, the manager; and give us their names, with what they have done, and we will try again. We will give as near as memory serves, the number of hands employed at the hoe and plough, then sum up and give their work, so as to be nearly accurate.

Saturday half day,	-	-	19	hands at the hoe.
Monday forenoon,	-	-	24	" " "
Monday afternoon,	-	-	18	" " "
Tuesday,	-	-	18	" " "
Wednesday until 4 o'clock,	-	-	17	" " "
Saturday,	-	-	7	plough hands.
Monday,	-	-	7	" "
Tuesday,	-	-	7	" "
Wednesday,	-	-	6	until noon.

This lot of hands scraped over, *well*, about 120 acres of low ground, very heavy and stiff.

To sum up; there were not over 53 or 55 days work of the hoe, and 24 days work of the plough hand.

We will now say how it was done, so that all who feel an interest that way, can do, and try to do likewise.

There were four turning ploughs barring off; on one side of the row, the plough did not bar off close, but left some 8 to 10 inches where the cotton scraper ran. Three of these were running until Wednesday; the other side was barred off as ordinary, and on that side the hand worked, scraping that side, and chopping out cotton to a stand. The cotton scraper, scraped one side of the row of about 12 acres, or over it a day, the rows being 6 feet wide, and done so near the cotton, that we, seeing the work, and knowing the land, pronounce it done well, and the most scraping we ever saw yet done any where. As to another matter—those negroes, nor mules are never pushed, as is too often the case. Those who would profit by the cotton scraper, can see them at work at Montgomery's or Madden's, (formerly Baldwin's) on Big Black, and at Log Hall. They can be bought at the shop formerly owned by John Spence, as made by Hanord, Hubbard & Co.—price two dollars, cash.

Profit by this, and no more complain of the hard work of scraping. There is one thing to be noticed at Montgomery's and here. We run an iron tooth harrow over the cotton ridge, before planting.

[*South-Western Farmer.*]

The mode of giving relief to choked cattle is, to let them have a good pinch of snuff. They will sneeze and throw up any thing that is too large to pass down. Will you try it?

CORN STALK SUGAR.

The experiments made by Mr. Webb, of Delaware, and others, in the cultivation of corn-stalk, and in the manufacture of sugar, places the matter beyond all reasonable doubt, as to its ultimate success. We are desirous of encouraging among our farmers, the introduction of every branch of industry, which will render us independent of foreigners. It is peculiarly gratifying to learn, that during the great depression of the last year, our exports *exceed* our imports nearly \$5,000,000. There are still a great variety of articles received from foreign countries, which we might manufacture and raise ourselves. The amount during the past year of this description imported, exceeded in value \$45,000,000.

We select from a communication from Mr. Webb, the substance of his directions, as to the cultivation of the corn and the preparation of the sugar. We would urge upon our farmers to try the experiment upon a small scale, and let us test the question in Central New-York—and ascertain whether we cannot manufacture our own sugar.

Mr. Webb's directions are—"To select the largest and best ears from the most productive corn in the neighborhood. The planting should be done with a drill machine. The rows running north and south if practicable, two and a half feet apart, and the seed sufficiently thick to ensure a plant every three inches. A large harrow, so arranged as not to injure the corn, may be used to advantage, soon after it is up. The after culture is performed with the cultivator. In raising cane, the practice is to raise as full a stand of cane as possible on the ground. The same is true of corn, and if any deficiencies occur, they must be supplied by replanting.

The next operation is the taking off the ears—many stalks will not produce any, but whenever they appear, they must be removed. Any time before the formation of the grain upon the cob, will be soon enough.

Nothing further need be done until the crop is ready to be cut for grinding. This may be commenced in August or September. The stalks should be topped and bladed while standing. They are then cut, tied in bundles and taken to the mill. The tops and blades, when properly cured, make an excellent fodder—and the rest—after passing the rollers, may be dried and used in the same way.

The process which has been employed in the manufacture, is as follows:—The juice after coming from the mill, stands for a short time to deposit some of its coarser impurities. It is then poured off, passed through a flannel strainer;—lime water is then added in the proportion of one or two tablespoonfuls to the gallon. Knowledge on this point can only be acquired by experience, though Mr. Webb has found no difficulty, no precise directions can be given. The juice is then placed over the fire, and brought nearly to the

boiling point—when it is carefully skimmed—completing the operation before boiling commences. It is then boiled down rapidly, removing the scum as it rises. The juice should be examined frequently, and if there is any appearance of foul particles which do not rise, it should be passed through the strainer again. To determine when the syrup is sufficiently boiled, a portion is to be taken between the thumb and finger—and if when moderately cool, a thread half an inch long can be drawn, it is considered done and poured into broad shallow vessels, to chrystalize. In some cases, the chrystalization commences in a few hours—in others, not till after several days. The sugar can be drained within two or three weeks after boiling.”

We intend as soon as we can procure the cuts, to give a description of the mill which is used for grinding the corn-stalks. They are constructed either of wood or iron, as may be desired, and are very simple in their construction. J.

[*Central New-York Farmer.*]

INSECT AND WORM DESTROYER.

Of the value of the article described below, as a worm and bug destroyer, we have no knowledge; but the fact that it has, unsolicited, been sent us for trial, with the understanding that we are to state its results just as we shall find them, is presumptive evidence that it will prove serviceable. We give publicity to the letter and the directions, in order that any persons who may be disposed, on their own judgment, to make trial of this new article, may know where to get it, and how to apply it in advance of our trial. We should take this course, but for the almost certainty, that we can not test and make known the results of our trial until it will be too late for others to send for and use the article, for their early vines this season. We do not recommend it, nor will Messrs. Brock & Co. obtain it on their own account, until its effects have been witnessed. But we are willing to aid any person in obtaining it, who may be inclined to make trial of it on the strength of Mr. Dey's letter and directions or card.—*Ed. N. E. Far.*

New-York, May 20th, 1843.

MR. PUTNAM:—*Sir*,—I have shipped one quarter barrel of the *Insect and Worm Destroyer* for you, and another for Messrs. Brock & Co.

I ask you to accept of these, with a view that you shall *experiment with them*, and see whether the article will be equally efficient in the destruction of bugs and worms with you, as it is with us. Mere accident brought about the discovery, and if my conjectures, as to the extent of its efficacy are correct, I think it will prove

among the greatest blessings to the farmer and gardener, which have been brought to light in these days.

Ask Mr. Breck to try the article, and if it proves satisfactory, he may advertise it for sale as agent, and I will send to him any quantity he may order.

In haste, respectfully,

A. DEY,

43 Liberty-street, New-York.

The following printed card, accompanied the above letter :—

Insect and Worm Destroyer.

A powder poison was discovered the last year, which will destroy bugs, flies, worms, and animalculæ of every description, that infest cucumber, melon, and other vines. It was tried with entire success last year on cucumber and melon vines, with only one application, and that without any injury to the vines. The experiment was made by putting a small quantity of the powder poison into a sieve, then holding it over the hill and giving it one blow with the hand ; a portion of the bugs took flight immediately, and next morning the ground was covered with the dead, which had apparently come out of the earth. It is a warranted article, and if it does not answer on vines, the money will be returned. It is believed to be a specific remedy against insects of every description, and will destroy those that infest shrubs, flowers and plants, cabbages, turnips, and vegetables of every description, the worm which destroys the corn in the ground, that infests the peach and plum tree, the Hessian fly ; and in fact, it is certain death to any insect or worm with which it comes in contact, and at the same will not injure vegetation.

It is made by the *Lodi Manufacturing Company*, and may be had at their factory on the Hackensack River, or at the office of the Company, No. 43 Liberty-street, New-York City. The price of one barrel, \$2 ; half barrel, \$1 50 ; quarter barrel, \$1—delivered on board any vessel in the city of New-York free of expense.

HOW TO MESMERIZE LICE ON PLANTS.

A correspondent of the Macon Telegraph says:

"If you think the following is worth any thing, you can let your readers see it, I don't think there is any mistake in the matter. I tried it on two plants that were covered with lice, and out of the whole number I could not find one live one. I have found great difficulty in saving ruta бага seeds, and this year they were ruined before I could find a remedy. After trying a great many other things, I thought of the following, tried it, and found it effectual.

Take a little barrel that has but one head, and enclose the plant that contains the animals to be mesmerized under the barrel, then

with a pipe, (or in any other way,) fill the barrel with tobacco smoke, then draw the dirt carefully round the mouth of the barrel, so as to prevent the escape of the smoke. Let the barrel continue there for twelve hours, (perhaps a less time would answer,) and it will be found that the animals are one and all, completely mesmerized. No mistake about this matter. So if plants that have been left for seed are treated in this way, it will be found that their lice-ships are completely disqualified for doing mischief.

A SUBSCRIBER."

REMEDIES FOR DISEASES OF CATTLE.

Redwater.—Bleed (says Youatt,) first, and then give a dose of 1 lb. of Epsom salts, and 1-2 lb. doses repeated every eight hours until the bowels are acted upon. In Hampshire they give 4 oz. bole armeniac and 2 oz. of spirits of turpentine in a pint of gruel.

Blackwater is the concluding and commonly fatal stage of redwater.

Cleansing drink.—1 oz. of bayberry powdered, 1 oz. of brimstone powdered, 1 oz. of cummin-seed powdered, 1 oz. of diapente. Boil these together for ten minutes; give when cold, in a gruel.

Colic.—The best remedy is 1 pint of linseed oil mixed with 1-2 oz. of laudanum.

A cordial is easily made by 1 oz. of caraway seeds, 1 oz. of aniseeds, 1-4 oz. of ginger powdered, 2 oz. of fenugreek seeds. Boil these in a pint and a half of beer for ten minutes, and administer when cold.

Diarrhœa.—Give 1-2 oz. of powdered catechu, and 10 grs. of powdered opium, in a little gruel.

Dysentery.—The same as for diarrhœa.

Fever.—Bleed; and then if the bowels are constipated, give 1-2 lb. of Epsom salts in three pints of water daily, in gruel.

Hove or Hoven.—Use the elastic tube; as a prevention, let them be well supplied with common salt, and restrained from rapid feeding when first feeding upon rank grass or clover.

Mange.—1-2 lb. of black brimstone, 1-4 pint of turpentine, 1 pint of train oil. Mix them together, and rub the mixture well in over the affected parts.

Milk fever, or Garget.—2 oz. of brimstone, 1 oz. of diapente, 1 oz. of cummin-seed powdered, 1 oz. of powdered nitre. Give this daily in a little gruel, and well rub the udder with a little goosegrease.

Murrain.—1-2 lb. of salts, 2 oz. of bruised coriander seed, 1 oz. of gentian powder. Give these in a little water.

Poisons swallowed by oxen are commonly the yew, the water dropwort, and the common and the water hemlock. 1 1-2 pint of linseed oil is the best remedy.

Purge, in poisoning.—Either 1 lb. of salts in a quart of water or gruel, or a pint to a pint and a half of linseed oil.

Sprains.—Embrocation: 8 oz. of sweet oil, 4 oz. spirits of hartshorn, 1-2 oz. oil of thyme.

Sting of the Adder or Slowworm.—Apply immediately to the part strong spirits of hartshorn; for sting of bees, apply chalk or whitening mixed with vinegar.

Worms.—Botts: give 1-2 lb. of Epsom salts, with 2 oz. of coriander seed bruised in a quart of water.

Yellows.—2 oz. of diapente, 2 oz. of cummin seed powdered, 2 oz. of fenugreek powdered. Boil these for ten minutes in a quart of water, and give daily in a little gruel.

[Johnson's Far. Ency.]

CRITERION FOR JUDGING STOCK.

At the annual meeting of the State Agricultural Society, of N. Y. held in January last, the writer called the attention of the Society, to the propriety of erecting a standard of form, and every point necessary to constitute a perfect animal, to be noticed according to its influence, in the decision of the judges. This excited considerable interest, and elicited some debate as to the manner in which it could be accomplished, and finally resulted in the following resolution, offered by Mr. Rotch:—

“*Resolved*, That the Executive Committee be requested to call a meeting of breeders, at such time and place as they may deem proper, for the purpose of discussing the different points of merit in domestic animals, with a view of arriving at some definite opinion as to the points most desirable to be obtained in breeding.”

As this subject is not only a very interesting, but a very important one, and requires some investigation, I am induced to throw out some hints and solicit the opinions and ideas of others on the subject, through the columns of this journal.

Suppose, for instance, to illustrate my ideas, the following should be agreed on as the points, as far as they go, for comparison, of horned cattle, and *that animals possessing* the greatest number of these points, shall be considered most meritorious:—

1. Head small, with a bright and prominent eye.
2. Hams small and tapering.
3. Neck small where it joins the head—large where it joins the shoulders.
4. Brisket broad, deep, and projecting well forward.
5. Shoulders full and no hollows behind them.
6. Body deep, round and capacious.
7. Legs short, full and muscular above the knee—small below.

8. Loins wide, and broad between the hips.
9. Flank well let down.
10. Tail set on even with the line of the back, small and tapering to bottom.
11. Though last not least, a soft supple skin covered with a soft silky coat of hair.

B.

[Central N. Y. Farmer.]

BLINDS TO BRIDLES FOR HORSES, &c.

MR. HILL,—In the Visitor for the last month, I noticed a short article recommending bridles without blinds, as having a tendency to prevent horses from shying or taking frights. I agree with the writer upon this subject, and since my attention was drawn to it, which was some years ago, I have remarked that horses, especially young ones, are more liable to take fright with the blind bridle than without. Some may suppose that the wagon or carriage has its influence in this, but I think it is more attributable to the blinds. Some years ago, I read in an account of an English traveller in Germany, that the horses in their carriages had no blinds to their bridles, and that in travelling, or with loads, their heads were not reined up, but left at full liberty. This mode was approved by the traveller for the reasons assigned by the Germans, that horses are not apt to be frightened when they can see—that their eye-sight is injured by blinds excluding air and light, and compelling the animal to a constrained and unnatural exertion of that organ;—these were the reasons assigned. For the other peculiarity of leaving the horse's head free, especially when on the roads with heavy loads, the reasons are that he works easier when he can swing his head and adapt it to his exertions, than when restrained; that in rising a hill with a heavy load, a horse will bend his neck low towards the ground, and that he will pull a load of greater weight than he can do if his head is reined up high, &c. Every one is aware how skilful the Germans are in managing cattle, and especially horses, and every laboring man proves the very great importance of having the limbs in a proper position for the exertion of muscular power. Those people who pull against horses, or rather let the horses pull against them, have not so great a superiority in strength as may be imagined from these exhibitions of strength. It is simply by placing themselves in a position for resistance, by which their muscular powers are brought most successfully to operate to counteract the exertions of the horses. This is well known to anatomists and those versed in the art of performing these feats. Does not the same reasoning hold good in horses in putting forth their strength? It may answer the purpose of a gay appearance, for carriage horses of those who ride for health or

pleasure; but I feel persuaded that if our farmers would use bridles without blinds, and give horses a free use of their heads for a short time, we should not see the present practice again recur to.

There is great, and it is believed, often unnecessary cruelty practised in what is termed breaking colts. Horses appear grateful for kind treatment,—they show evident signs of affection to those who treat them kindly. The Arabs, who possess, perhaps, the most courageous and fiery breed of horses known, have at the same time the most docile and best trained. They sleep with them in the same tent; their children lie down and climb upon their horses without fear and without injury. I once knew a man in our sister State of Massachusetts, who reared, and broke to harness, a great number of colts. He was a practical man, of the old three-cornered school, and the last man in my native town who wore, which he did to the last, the revolutionary hat. He had great fondness for horses, and used to say that although he had broken hundreds of colts, he had never struck one with the weight of a lash. His practice was first to put a bridle only upon a colt, and fasten him to the halms of an old steady horse before the oxen about the farm, and let him lead in this way for a day or two. He then put on a collar and halms, and let him lead about for a day or so more, as convenient. Any horse would answer, but the best was the mother of the colt. Next he put the traces in addition, but fastened them up between the halms, and merely let them jingle about the sides of the animal, and this answered for one or two days more, or at a number of times when convenient. By this time the young animal became accustomed to the feel and rattle of harness, and also to *go slow*, which is an important object. To finish, he is hitched before the oxen by the side of another horse, with an empty cart.

In this way, without the least severity, his young horses would readily go in harness, and as my old friend said, they would pull soon enough. When once learned to go slow, they would readily learn to go fast, and after a few days of use by the side of another horse, they would quietly go without such company. We all know how important it is to form good habits in horses; that if when young they become frightened or discouraged, it is rare that they ever forget it; and we also know that when a horse is what is termed obstinate, they will die under the lash, before they will move forward. This is generally, if not always, owing to mismanagement at first—and whatever is done, a colt should never be brought into use by a timid man, for the animal will most certainly find it out.

Have we not, many of us, much room for improvement in the treatment of this animal, which a kind Providence has bestowed for our use? After a hard day's toil, we require a wholesome meal and a comfortable repose: does not the animal that has toiled with us, require as much? My old three-cornered friend was ever

kind to his horses; it was a rule with him never to let a horse stand upon any other than a dirt or clay floor, and this should be level, or very nearly so. A horse when standing, if left to himself, will never stand on sloping ground. He takes a level spot, and almost every one has remarked the horses in a livery stable, that if not in the act of eating, they stand back at the halter's length, because this brings their hinder feet upon the raised part, or rather brings the animals upon a level. If our stables are, as they should be, on dry ground, a very little clay or dirt twice a year, will suffice to fill up the inequalities produced by the wear of the feet, and keep the horse's feet in better condition and their joints less liable to swell than when on a plank or paved floor.

As a general truth, do we not drive our horses too fast? All horses have a natural gait, and when pushed beyond that, it wears upon them and makes them prematurely old. Nine times out of ten it would be difficult I think to assign any good cause for fast driving. If the surgeon is wanted to take up an artery, and which, if not done promptly, the man must die, why then put the horse to his best, and if he is well used at other times, he will be enabled to do it so much the quicker; but these cases, and similar ones, are rare, and we lose more than a little by fast driving. All teamsters accustomed to take heavy loads, are aware of the fact that, with good keeping, their horses are easily kept in good condition, for they move slowly. By fast driving, we lose in the wear and breakage of the carriage; we lose in the expense of keeping our horses in creditable condition; they are made prematurely old by the heat and cold from the violent exercise; and to the man of a good heart who is tender of the mute animals given us for our use and not abuse, is there not also a loss in our humane feelings.

A FARMER.

[*Far. Monthly Visitor.*]

PAGE'S SAWING MILL.

At a meeting of the Board of Trustees of the Maryland Agricultural Society for the Eastern Shore, held at the residence of Gov. Samuel Stevens, on Thursday, the 27th of April, 1843, Mr. Tilghman Goldsborough presented and read the following paper descriptive of the Steam Saw Mill, lately erected on Tilghman's Island, by Gen. T. Tilghman and Mr. George Page.

On motion, the said paper was ordered to be published.

(Signed,) SAMUEL HAMBLETON, *Chairman.*

In the latter part of February last, I visited Tilghman's island, and observed for several days the operation of the lumber sawing establishment lately erected there by Gen. T. Tilghman and Mr. George Page, and as this establishment may be classed among the

mechanical wonders of the present age, and is likely to become interesting and important to agriculturists, I deem it an appropriate subject of consideration for our Board, and therefore beg leave to submit the following:—

It is known to the Board and to the country generally that about two years ago, Mr. George Page, of Baltimore, invented and patented a mode of sawing logs into lumber of all dimensions, by means of a circular saw—and I will here remark, that I was among the many who doubted Mr. Page's project—knowing that the most ingenious efforts of skilful mechanics, both in this country and in Europe, had for very many years, been vainly exerted in endeavoring to remedy the heating of circular saws when cutting long and deep lines, and that the difficulty of avoiding this had appeared to the mechanical world, to be insurmountable. But Mr. Page has overcome this difficulty by a very simple, and hence the more admirable, contrivance; and a visit to any of the mills he has constructed will convince the most skeptical, that his circular saw may be driven through a log at any attainable velocity, without becoming in the least hot, provided the saw is in decent order and adjustment. The chief object of this communication is, however, to give a general idea of the particular establishment mentioned above.

Some time in December last, Mr. Page landed with his machinery on Tilghman's island, and temporarily fixed up in the woods, his patent portable Steam Engine of ten horse power, and the Saw Mill, and proceeded to saw the lumber for the houses requisite to cover himself, the hands and the mill, and he had erected when I was there, a building forty-three by sixty-five feet, to cover the mill, and five small buildings used as shantees, kitchen, stable, &c. &c.; and having constructed a pile-driver, which had, as a "make shift," a large hickory log as a hammer, he had built a wharf about 200 feet out, into Black Walnut cove. Measuring from the extremity of the wharf through and beyond the mill, there was an extent of flooring of about 500 feet, on which they moved, and piled their lumber as it was cut. The amount of work which had been done by a dozen hands, to fix up and equip such an establishment in so short a space of time, and at such an inclement season, appeared wonderful; and could only have been effected by a master mechanical mind, directing the labor of men and of labor-saving machines and implements.

In the northwest corner of the mill-house, stands the portable ten horse engine, which drives all the machinery. In the roof is a line of iron shaft 40 feet in length, which is put in motion by the engine, and from the pulleys on this shaft, belts are led to drive the mills and other machines. The saw mills are placed about the middle of the house, and the log carriages travel north and south in the direction of the wharf. The rail-ways on which the log carriages travel, extend out about one hundred feet from the house towards the woods, and where the teams deposit the logs

along the sides of those rail-ways, so that two men can push the carriage out and roll the log on, (which they do with facility, as the carriage is upon a level with the long poles, or skids, on which the logs are deposited by the teams,) and then push the carriage with the log upon it, back to the mill. As each piece of lumber is cut from a log, it is laid upon a small two-wheeled car, having eight cast iron wheels and an iron axle, and two men will draw to the wharf, or river bank, (the way being floored and on a gradual descent) all the lumber cut from a large log.

It will thus be seen with what facility and consequent cheapness lumber can be sawed and handled at these mills.

At the south end of the building is placed a mill with a cross cut circular saw, four feet in diameter, for cutting cord wood, or for cutting off scantling in lengths suitable for garden pales, laths, &c. The log carriage of this mill is placed parallel with those of the other mill, but its saw being a cross cut, or cut off saw, is of course placed differently from the other saws, and cuts transversely of the carriage. This saw is placed in a frame, which is suspended from an axis fixed over head, and the saw with its frame swings to and fro, transversely of the stuff to be cut. The saw being driven by a belt from a pulley on the said axis, the tightness of the belt is not affected by the different positions of the saw. The bed of the carriage, on which is placed the stuff to be cut, is concave, and is the arc of a circle whose centre is the aforesaid axis. The carriage being filled with slabs, or logs, to a depth of 22 inches or less, is moved forward until the ends of the stuff to be cut have passed the saw any desired distance, (four feet if for cord wood,) when the saw is pressed in gear and speedily cuts through the pile; the saw is then pulled back by a weight attached to it by a cord, which passes over a pulley—the carriage is moved forward as before, a similar distance—the saw is pressed in gear again, and cuts off another length, and so on until the whole of the stuff in the carriage is cut up. As the slabs are cut from the logs by the other mills, they are laid upon the carriage of the cross cut mill, which, if not occupied in cutting logs into cord wood, remains at rest until it is filled with slabs as above described, when they are speedily converted into cord wood; and thus it will be seen, the proprietors of this establishment turn to profitable account even the slabs, which at other mills accumulate in huge unsightly piles, for which there is no market, and the labor and cost of their removal is therefore dead loss. I would here remark, that as the cord wood cut at this mill is precisely of the intended length, and the ends of the sticks are square, the consumer will get full measure.

They also propose to offer to the city markets, wood cut into lengths for ordinary fire-places and for locomotive engines, which would save the trouble and cost commonly incurred in chopping or sawing cord wood.

In the north end of the house is situated the machine for morticing fence posts. They furnish white oak posts morticed for five plank, and yellow pine plank six inches wide, and an inch and a quarter thick, all ready to be put up without the aid of a carpenter, at fifty cents per pannel, five planks high and nine feet long.

They furnish garden pales at seven dollars per thousand. The garden pale and lath mill is placed in the roof of the building.

All these different mills are placed on the same north and south line through the house, and the saw-dust falls into a trough which is placed just under ground, and extends from one end of the house to the other. In this trough is placed a large wooden screw, which being kept in constant motion by the engine, draws the saw-dust into a pit at the north end of the house, from which it is dipped up by sheet-iron buckets fastened to a belt, and is carried upwards and tumbled into a car, which will hold about 35 or 40 bushels.—When the car is filled with saw-dust, a lad draws it away on two parallel lines of plank (answering as a rail-way) and tilts it into the river. Beautiful are the contrivances by which labor is saved in all the operations at this establishment—those contrivances struck me as being more admirable and wonderful than the operation of sawing.

Of the regular speed of the mills in cutting lumber, I had no full and fair opportunity to judge; for whilst I was there, the hands were partly withdrawn and engaged in the construction of the bridge to connect the island with the main, and which was soon after completed. But for the prevalence of low tides and high winds, this bridge, 300 feet in length, would have been completed in two days. I saw, however, one of the mills cutting plank 12 feet long and 14 inches wide, at the rate of one such plank in three-fourths of a minute; at which rate, both mills would cut 8 such plank in three minutes. I saw also 5 pales cut per minute. 20 laths cut per minute, and 1 post morticed per minute. But this I presume, was faster than the ordinary work of the mill. I saw enough to be satisfied that the mills would perform all Mr. Page claimed for them in his advertisements—and having been for three years, somewhat familiar with, perhaps, the finest steam-saw-mills in this country, those at Wilmington, North-Carolina, I am now convinced that lumber of all sorts can be manufactured cheaper at Tilghman's island than at any other place in the country. They have great advantage from the mills being located in the heart of a forest, situated on the navigable waters of the Chesapeake, and hence a large portion of the costs ordinarily incurred in bringing logs to the mill and in the shipment and transportation of the lumber, is saved.

They also furnish, all complete and ready to be put up, small houses built upon a plan which was invented and patented some years ago, and designed for the use of emigrants to the West. Nothing like scantling or timber is used in the construction of

these houses. They are built entirely of plank, and the floor, sides, ends and roof composed of two thickness of 5-8 inch thick plank, and nailed to battens, somewhat as a batten door—observing to keep the joints or seams in the outer course, midway between those of the inner course. The above named component parts of the house are made at the mills, placed on board vessels and sent wherever desired. In raising or erecting the house, the floor is placed upon blocks of any durable wood, planted on end, and similarly arranged to those ordinarily supporting corn houses. The sides and ends are then set up, the corners are nailed together, and the roof is laid on and fastened, which completes in a few hours work, the erection of one of those novel buildings. They are neat looking houses, and are suited for dwellings for laborers on a farm, for geer and tool houses, poultry, &c., and are as dry and warm as any wooden houses I have ever seen, appropriated to such purposes. They furnish such a house, one story high and 14 by 15 feet, for \$15.

There is upon the island a large body of white oak and yellow pine timber, interspersed with hickory—and since we can now obtain lumber for our farm and other buildings and for fencing purposes, and houses, (of the above description) cheaper than heretofore, I have therefore considered these mills interesting and important to agriculturists, and this is my apology for laying before you this long communication.

[*American Farmer.*]

COMPARATIVE NOURISHMENT OF DIFFERENT VEGETABLES.

If as an article in the last Cabinet, signed *Vir*, states, “the difference of opinion with regard to the value of root crops, as cattle feed, are indeed about as different as light is from darkness,” the following table, showing the comparative nourishment of some of the principle kinds of vegetable food, may possess interest. The table was formed by Boussingault, an eminent French chemist—and he tells us that he compared the result of his experiments with the practical experience of farmers in feeding cattle, and found “a most remarkable coincidence between the theoretical and practical inference.” The table is from a late number of the Boston Medical and Surgical Journal, and is as follows :

White French beans,	-	-	-	-	100
Yellow peas,	-	-	-	-	120
Farina of cabbage,	-	-	-	-	148
“ of carrots,	-	-	-	-	170
“ of wheat,	-	-	-	-	175
Wheat,	-	-	-	-	191
French wheat,	-	-	-	-	193
Rye,	-	-	-	-	200
Farina of barley,	-	-	-	-	212

Farina of potatoes, -	-	-	-	225
Barley, -	-	-	-	232
Indian corn, -	-	-	-	246
Potatoes, -	-	-	-	1096
Carrots, -	-	-	-	1351
White cabbage, -	-	-	-	1446
Turnips, -	-	-	-	2383

"Thus we see that 100 parts of white French beans are equivalent in nutritive power to 120 parts of yellow peas—to 1096 of potatoes, and 2383 of turnips. A farmer for example, in feeding cattle would find that 120 parts of yellow peas, would go as far in keeping up the strength and efficacy of his cattle, as 2383 parts of turnips." Or it would require more than 23 bushels of turnips, or two bushels of rye, to be equal in nutritive power to one bushel of white French beans.

These statements, it is believed may be relied upon as approximating the truth; through the fact that it should require nearly two bushels of wheat to equal in nutrition one of beans, may be a little to many. When *farina* is given, as of cabbage, potatoes &c., the meaning is, that the article was dried and reduced to flour, by grinding, or otherwise.

[Farmer's Cabinet.

THE TOMATO.

The celebrity of this plant has become astonishing. A few years since prejudice reviled at its excellence with its most vindictive tauntings. Now; it is an article of so general popularity, scarcely a gardener, or an apology for one is to be found where it is not cultivated, and almost every voice is loud in proclaiming its excellencies. The tomato has three kinds of varieties, to wit; the large common, the egg, and the golden crop. We prefer the two last kinds for culture as they are firmer, or more solid in their texture and more delicate in their flavor. The tomato may be started in a hot bed, or in boxes in the house in March. Then by care, large thrifty plants will be ready for putting out as soon as the season of frost is passed. They do not require a rich soil; this causes them to run too much to vine, but rather an excitement to push forward to perfection.—We know of no more sure effective to produce this than to put, say half or a third of a common shovel full of hen or pigeon's dung in the hill. It is admirably calculated for pepper or for tomatoes.

After the early frost had killed the vines last fall, a friend of ours, of close observation and exact calculation, experimented by feeding the tomatoes that remained to her cows. They were readily eaten, and the quantity of milk was increased. This certainly adds another to the thousand and one uses to which they have been applied.

[Farmer's Cabinet.

Published by request.

ANALYZING OF SPECIMENS OF MARLS.

Silver Bluff, June 14, 1843.

MESSRS. EDITORS,—You will oblige me, and also the persons interested in the facts reported, by publishing the following statement of the calcareous contents of some of the marls of which I have examined the localities, and selected specimens, since your publication of my previous similar report of marls of the other parts of the lower districts of this State.

Respectfully,

EDMUND RUFFIN,

*Agricultural Surveyor of South-Carolina.**Marls (and limestone) of the Santee, and its tributaries. Continued.*

Marl of Vance's Ferry, (Orangburgh) upper layer, taken about 25 feet above and back from the river, contains of carbonate of lime, 86 per cent.

Vance's Ferry, lower visible layer above the river, 90.

Limestone, layer between the two above, 92.

Marl from Avinger's land, 25 feet above the river, 84.

From A. Felder's, 94.*

Keating Simons' land, softer layer under overhanging shelf of limestone, and near surface of the river, 96.

Do. inland, and top of stratum, 82.

Hale's mill, 51 per cent. of carbonate of lime, and about 25 of green sand—the latter judged by the eye.

Marl from Canehall, 86.

Limestone, from the cavern of same, 80.

Green sand marl, upper layer, from a branch of Stout's Creek, 35 per cent. of carbonate of lime, and about 20 of green sand.

Under layer of same, limestone, 64.

Of Edisto River and its Tributaries.

Marl from Slater's land, (Barnwell) $1\frac{1}{2}$ miles above Johnson's, or Binnaker's Bridge, 36.

At Johnson's Bridge, near surface and yellowish, 38.

At Johnson's Bridge, near surface and bluish, 36.

At Johnson's Bridge, 8 feet deep, 31.

At Walker's or Stokes' Bridge, soft and sandy, 31.

Do. Limestone, 37.

On Four Holes Swamp, Zimmerman's, 86, and about 5 of green sand.

Do. John A. Tyler's, (formerly Dr. Jamison's) marl or softer part, 93.*

Do. stony layer of same, 94.*

On Cawcaw Swamp, Wannamaker's land, 62.

Do. do. M. Pooser's, 26.

Of Little Salkehatchie, and its Tributaries, in Barnwell.

Dowling's Mill, 7.†

Cedar Spring, on Lemons' Swamp, (Miller's land,) 73.

* These have been burned to lime for sale, and very successfully.

† This is the upper surface, and being so poor is of no value or interest, except as indicating the presence of the body of marl. The surface is often much poorer than at the distance of but a few inches lower in the bed.

Of Savannah River, and its Tributaries.

On a branch of the Lower Three Runs, Boiling Spring, (Col. Hay's,) 74.

From Spring half a mile lower, (Col. Hay's,) 62.

On main stream, W. Hally's low ground, 64.

Do. do another specimen, 62.

Thin soapy layer forming upper surface of this marl, and found in different parts of the bed of the creek, 22.

Gillett's mill, (Gen. Erwin's) 64.

Do. softer, 46.

The marl or matrix of the bed of large oyster shells (*Ostrea gigantea*), on Lower Three Runs, the sandy, 21½.

Do. the hard or stoney, 40, (the shells themselves, which form the larger proportion of the bed, of course, are pure carbonate of lime.)

Tinker's Creek, branch of Upper Three Runs, John Cannady's land, 7½. (The appearance of shells would indicate a much richer marl; but they have been mostly silicified.)

Rev. Elliot Estates' Land on the Savannah River, marl on the softer part, 92.

Do. hard or stony, 90.

At Shell Bluff, on the Savannah, section of marl exposed, 72½ feet perpendicular above the river. Different layers, of which specimens were taken, showed the following degrees of strength.

1. (or upper) layer two feet thick, compact, and of close texture, but not hard marl, yellowish white, 89 per cent.
2. Four feet, deeper color, 52½.
3. Three feet, hard, 86.
4. Seven feet, brownish and harder, full of empty moulds of shells, 94.
5. Four feet, concretion of fragments of shells, pale purplish tint, 82.
6. Two feet, pale yellow, and apparently poor, with some casts of shells, 60.
7. Sixteen feet dingy white, with pale greenish tint, 51.
8. Dingy white, 81.
9. Ferruginous, brown, 71.

The last two taken as the supposed richest and poorest parts of various thin layers making 10 feet in thickness.

10 and 11. Fourteen feet of coarse granular concrete, of homogeneous appearance and seemingly of equal quality; yet the two specimens were respectively 50 and 86.

12. Two feet of soft marl, reaching to the river, out of which layer bold springs issue, 58.

13. Four feet below the last, exposed at another place by the higher level of the strata, 78.

Other varieties sometimes are interposed, or substitute some of the above. Some of the most important, for their quantity, are the following:—

Brownish ferruginous concrete of fragments of shells, compact, but not hard, 80.

Pale yellowish sand, to the eye appearing to be all silicious, 50.

Compact, hard and close grained limestone, 84.

White, compact, argillaceous marl, very like chalk in appearance—one specimen 48, and another, the upper, 87.

We look upon a good book on agriculture, as something more than a lucky speculation for the publisher, or a profitable occupation of his time, for the author. It is a gain to the community at large—a new instrument of national wealth. The first honor or praise, in reference to every such instrument, is, no doubt, due to maker or inventor—but he who brings it into general use, merits also no little approbation. It is to the more general diffusion of sound agricultural literature among our farmers, that we look for that more rapid development of the resources of our varied soils, which the times so imperatively demand.

Blackwood's Mag.

For the Southern Agriculturist.

TO DESTROY LICE ON PEACH TREES.

MR. EDITOR,—The lice described by your correspondent "L." as infesting his Peach and Plum trees, are the offspring, I believe, (though I am no entomologist,) of the lady-bug. They are more destructive than any insects I have ever had to contend with; but while the trees are yet of small size, their depredations may be readily checked. After trying many experiments, I have found the use of ambier* to be the most effectual means of destroying them. Make a strong decoction of tobacco, and apply it by means of a cloth, which should be passed upwards along the branches, enclosing them completely during the operation. A portion of flour of sulphur may be added, as I have sometimes done. It cannot be injurious, and may contribute to the efficacy of the remedy; but I regard the ambier as all-sufficient. With this application I have frequently saved my young peach trees, when the tender leaves were covered with the lice; but when the trees have attained a larger size, and the branches grown out of reach, some other mode must be resorted to. In such cases, I would recommend boring a smooth hole, with a centre-bit, in the trunk of the tree near the ground; and then filling it with flour of sulphur and plugging it up. I have seldom had my trees infested with these lice, after the second year's growth; but on a few occasions I have tried the sulphur in the manner I suggest, and found the insects to disappear in the course of a few days. It also appeared to be a protection against the grub. The recipe you have published will not destroy the insects which prey upon the foliage, but it is no doubt good to promote the general health of the tree. No tree, however, not constitutionally affected, will become diseased, if the ground be well cultivated; especially, if a small portion of lime or marl be chopped in around the roots. It is good to guard against insects, to impart vigor to the growth, and to contribute to the perfection and early maturity of the fruit.

T. S. P.

Petersburg, Va. June 2, 1843.

* We are unacquainted with this *term*, perhaps it is one given to the decoction above described;—if so, it is a new Virginia name for *Tobacco juice*.—ED. SO. AGR.

MISCELLANEOUS.

VALUE OF AGRICULTURAL PRODUCTS OF THE U. STATES IN 1842.

The American Farmer publishes the following estimate of the value of agricultural products of the United States, which it says is based upon the "tabular estimate of the crops of 1842," made by the Commissioner of Patents in his Annual Report communicated to Congress. The prices set down are those which prevail in this market, or such as are supposed to be a fair average at other places. The actual prices here are designated by the letter *a*, those supposed by the letter *s*.

Articles of Produce.	Quantities of Produce.	Money Value.
Wheat, - - -	102,371,340 bush. at 75 cts.	<i>a</i> \$76,738,005
Barley, - - -	3,871,622 do. at 50 cts.	<i>a</i> 1,935,811
Oats, - - -	150,833,617 do. at 22 cts.	<i>a</i> 33,194,325
Rye, - - -	22,762,952 do. at 50 cts.	<i>s</i> 11,381,476
Buckwheat, - -	9,483,409 do. at 40 cts.	<i>s</i> 3,793,363
Indian Corn, -	441,829,246 do. at 42 cts.	<i>a</i> 185,568,283
Potatoes, - -	135,883,381 do. at 25 cts.	<i>a</i> 33,790,845
Hay, - - -	14,053,335 tons at \$10	<i>s</i> 140,533,550
Flax and Hemp, -	158,569 $\frac{3}{4}$ " at 120	<i>s</i> 19,028,370
Tobacco, - -	194,694,891 lbs. at 6 $\frac{1}{4}$ cts.	<i>s</i> 12,169,330
Cotton, - - -	684,333,231 do. at 8 cts.	<i>s</i> 54,666,658
Rice, - - -	94,007,484 do. at 2 $\frac{1}{2}$ cts.	<i>s</i> 2,350,187
Silk Cocoons, -	244,124 do. at 50 cts.	<i>a</i> 122,062
Sugar, - - -	153,345,199 do. at 5 cts.	<i>a</i> 7,122,259
Wine, - - -	130,748 gals. at 50 cts.	<i>s</i> 65,374

Supposed value of the above fifteen articles, \$582,639,968

Above is the value of the estimated products of fifteen articles only, the growth of 1842, amounting to six hundred millions of dollars; and yet, as a people, we are oppressed to the earth with pecuniary debts and difficulties, and almost without credit at home or abroad. Such a state of things is unparalleled in the history of the world, and it is useless to blink the question longer, as there can be no doubt but that, through the course of ruinous measures, tending to the derangement of the currency, and the prostration of individual and public confidence, the interests of the farming and planting classes have been paralyzed.

[Balt. Amer.]

FRUIT STAINS.

The fumes of brimstone will remove fruit stains and iron mould from linen and cotton. Moisten the part stained, with cold water, then hold it over the smoke of burning brimstone till the stain disappears.

INDIAN CORN.

It has often been a question by many farmers whether one hundred bushels of shelled corn can be raised on an acre. The fact that it has been done is obvious and cannot be disputed. If we look at the matter clearly we shall see that even more than this can be raised from one acre of land. We will suppose the hills of corn to be planted three feet apart each way, we shall have on an acre four thousand eight hundred and forty hills, and allowing that four bearing stalks should remain in each hill, producing one ear, and each ear producing seven ounces avoirdupois of shelled grain the amount of one acre would be eight thousand five hundred and 32½ lbs. of grain; and 60 lbs. to the bushel. [56 being the legal weight.] the yield from one acre would be over one hundred and forty bushels.—But if this can be done, why is it not done? There is only one answer to be given, a want of sufficient cultivation—There is a great deal lost in not having that care and exactness, in making the hills so large, or that the number mentioned shall be comprehended on an acre. And also there is too little seed sown, so there is but little chance to select from the hill, for continuance, the most vigorous and thrifty plants. There is not a sufficient quantity of manure given to the land, a cornfield should always be well manured, and by placing the manure in the hill without spreading it upon the land is prematurely forced in the beginning, and consequently does not find food enough to bear it out in the latter part of the season. There is still much to be learnt in this matter, and there is every reason to believe that the time will come, when to every careful farmer, one hundred bushels of shelled corn to the acre will be no more uncommon than fifty bushels at the present time.

[*Farmer's Journal.*]

WIRE WORMS.

A friend has given us an account of an experiment made the past summer to prevent the depredations of the wire worms. A farmer had the previous year applied to a part of his corn, manure from the hog pen in which there was an abundance of cobs, and where this manure was used no injury was done by wire worms, while other parts were much injured by them where other manure was.

Supposing that the protection was owing to the cobs, he made an experiment the past season by putting two or three cobs into each hill, among the manure which was not from the hog-pen, on a part of the piece, and the rest of the piece was manured in the same manner, excepting the cobs.

Where the cobs were the corn succeeded well, and was not injured in the least by worms; while on that part where no cobs were used the wire worms did much damage. On taking up the cobs and examining them it was found that the pith was full of wire worms.

From the result of this experiment, it seems that the worms prefer the pith of the cob to the corn, and that nature has wisely provided for the protection of corn, when the ears fall to the ground, and the corn grows spontaneously, as the worms will find their favorite food in the pith of the cob, which allows the corn to escape their depredations. We should be pleased to hear the result of other experiments on this subject. [Ibid.

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EFFECTS OF SALT UPON CELERY.

Some time ago, we pointed out the beneficial effects of salt in growing asparagus. There is another plant cultivated in gardens, which would be greatly benefited if a little more salt was added to its food—for I believe the manure which it commonly receives, is as wairish to its taste, as brose without salt to a Scotchman.—Celery is the plant I mean; I recollect gathering it in a wild state, some years ago, on the north side of the Frith of Forth, in situations that would be watered by spring-tides—and, I believe that it is commonly found, both in England and Scotland, in ditches near the sea. This season I gave a considerable quantity of salt to a row of celery, by putting it between the plants some time after they were planted. I then watered them freely, which carried the saline particles down to the roots. This appears to have done the plants much good, for they grew remarkably well afterwards. From the Report of the Convent Garden market, some time ago, it appears that celery this season, has been rather shorter than usual. Some of my plants to which salt was applied, measured by the middle of September, four feet in height, 30 inches of which were well blanched. [Gardner's Chronicle.

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PRUNING FRUIT TREES.

It will be found upon experiment, that a wound made on a tree in March or April, will look black as soon as the sap begins to flow, and that the sap will ooze out until the leaves have put out so as to receive it; while a wound made in June, will remain white, and immediately commence healing. The wound of a tree that has been broken by being loaded with fruit, or otherwise, while the tree is green with foliage, will look white and the wood remain sound; while one broken in the winter, by snow, or from other cause, will look black and incline to decay.

It has been my humble lot to spend most of my time in the spring and fore part of the summer, in engrafting and pruning fruit trees, and my experience goes to prove that the best time for pruning, is when the leaves are full grown, and the tree is in a vigorous and and growing state. For at this season, when the sap has been spent in the foliage, and the pores of the wood are filled, so that when the limb is taken off, the sun and warm weather will dry the end of the limb and close the pores of the wood against the weather, the sap will keep the limb alive to the very end, and the healing will be perceived immediately. Boston Cultivator.

THE BLACK BIRD.

The black bird is one of the species against which the efforts, not only of idle boys, but of our farmers are directed, on account of its habits of attacking the Indian corn, at the time it is sprouting from the ground. It is somewhat vexatious, to be sure, to have this injury done our corn crops; but before the farmer engages in the warfare against these birds, he should take into consideration the fact, that they save ten times the amount of corn they destroy. They pick up thousands of insects that would do far greater damage. There are only two short periods while the black birds remain with us, that they eat vegetable food, in the spring when the corn is sprouting from the ground, and in autumn when it is mature. The remainder of their summer's sojourning is spent in rendering us the most essential aid. On opening the stomachs of these and many others, worms, bugs, small reptiles, sometimes as many as fifty or sixty may be discovered in the stomach of one individual. The farmer should recollect that in destroying even one of these birds, he is committing a direct injury on his own property, as well as injuring the community at large. This cause, if no other, should induce parents and guardians who have the charge of idle boys, to restrain them from wanton destruction of the feathered tribes.

[*Far. & Mec. Jour.*]

MONTHLY CALENDAR

OF

HORTICULTURE AND FLORICULTURE.

FOR JULY, 1843.

VEGETABLE GARDEN.

Sow bush or snap Beans, the best kinds for this month are the early ones, such as white negro and yellow dwarfs. They should be planted in ridges about 5 inches high and 18 inches apart; should the weather be very dry, it would be advisable to steep them 6 or 8 hours in rain water, and also to water the drills previous to inserting the seed.

Cabbage Plants may now be set out. The beds ought to be well manured, and the plants set 2 feet apart. You may still continue to sow some seed, and if the weather prove favorable, they may be put out in 6 weeks.

Cauliflower and Brocoli Plants.—These must be planted in a highly manured piece of ground; the former must be planted about 2½ feet apart in rows, and the latter in rows of 3 feet; in dry weather they must be regularly watered, until well rooted. The young plants, if possible, should be sheltered from the sun. The seed of these plants may yet be sowed, and should be protected by bushes from the intense heat of the sun; a moderate watering, should the weather prove dry, will be of great service both before and after they come up.

Leeks sown in the beginning of last month may now be set out. You must select the largest plants, and prepare them for planting, by cutting off the ends of the roots, and likewise the leaves. They should be planted in a moderately manured piece of ground, about 6 or 7 inches apart from each other, and watered in the evening until they take root.

Onions sown in the spring are now fit to be taken up, leave about 4 inches of the stalk to each root. Spread them out on some dry spot to harden for 10 or 12 days, frequently turning them.

Carrots and Parsnips.—These may still be sown with some prospect of success, if care be taken to prevent the sun from scalding their roots, and the heavy rains from beating them down; this may be effected by covering them as occasion may require with the bushes.

Endive.—This may be sown the latter end of the month, in an open place, not too thick; should the weather be dry, water the seed and the young plants, as may be necessary.

Turnips.—Sow the seed in an open situation, in fresh dug ground, as regular as possible, and not too thick. The soil must be well dug and soft, and divided into beds from 4 to 10 feet wide, allowing a sufficient space between, to attend to the growth. It would be better if the beds have a little declivity, so as to allow the superabundance of rain to pass off.

Lettuces.—The Silesia and curled coss are the best species to sow now, and may be sown twice in the month.

Celery.—Make trenches about a foot broad, 6 inches deep, and 3 feet apart; put in the bottom of them some well rotted manure, and dig it in; select the best plants from the seed bed, trim the ends of the roots, and remove imperfect leaves from the top; plant them in a row along the middle of the trench, 5 or 6 inches asunder, and give them repeated and good waterings every evening in dry weather, until they have become well rooted.

Radishes.—Salmon, short top, and turnip Radishes, may yet be sown, but from the uncertainty of the weather in this month, the crop will be uncertain.

Small Salading, such as Mustard, Cresses, Rape, &c. may be sown once a week for a succession.

Spinach may be sown the latter end of this month, which will be fit for use in the autumn. The round seeded or broad leaved, is the best to sow at this season. A piece of ground must be well dug, and the surface laid even, and then divided into beds of 4 feet wide; draw four drills on each bed; scatter the seed thinly on them; draw over the hoe very lightly, and then rake the surface even. In dry weather water well both before and after the seed come up.

FRUIT GARDEN.

Summer pruning of Peach, Nectarine, and Apricot Trees, becomes now necessary for the improvement of your fruit, the generality of the two former of which are now about half ripe, and the latter nearly or wholly expended. This operation must be done early in the month, if it has hitherto been neglected. A great advantage is derived from early summer pruning, in permitting the sun and air and gentle showers to have proper access to the young fruit, and in ripening the shoots perfectly for the next year's bearing. Every shoot at this time must be left at full length; and those produced since the last month ought to be removed. In very dry weather, the trees should be plentifully watered, as at this season there is a heavy draught upon the soil for nourishment, and water is the principal. About the time the fruit appears to be ripening, say one week before they ripen, take away such small branches and thick foliage, as shade the fruit, so as to admit the full power of the sun upon the fruit, this will not only improve its color, but greatly increase its flavor.

FLOWER DEPARTMENT.

Not much is to be done this month in this department, except keeping the beds and walks clear of grass and weeds, and watering according to the season. Several handsome annuals are now in blossom; such as varieties of Balsam, China Asters, Coreopsis, &c. Roses may now be budded; the best stalks to bud on are those of the daily rose they live longer, and not so likely to decay as those of the annual or spring rose. Varieties of the moss Rose budded upon the branches of the daily, make a very ornamental bush. Attention to watering is very important this month. Geraniums, and most pot plants, require to be protected from the intense heat of the sun.

To the Agricultural Societies of South-Carolina.

Mr. Ruffin has consented to attend a Convention of Delegates from all the Agricultural Societies of the State, at Monticello, Piedmont, on the 5th July next, in consequence with the resolution of the Monticello Farmers' Society, at its March Meeting. Delegates are, therefore, referred to the address of Mr. Ruffin, as to the sort of information required, and the manner in which it is to be embodied. *See May Number.*

It is most earnestly desired, that all existing Societies, as well as those that may yet be organized, will send delegates, prepared to furnish the Agricultural Societies of the State, and to suggest and aid in the discussion of all subjects relevant to the object of Mr. Ruffin's appointment.

JAMES B. DAVIS, *Chairman of Convention.*

P. S.—Every effort will be made to secure comfortable accommodations for the delegates.

RUFFIN'S CALCAREOUS MANURE

ELEMENTS OF AGRICULTURAL CHEMISTRY,

In a Course of Lectures for the Board of Agriculture, delivered between 1808 and 1812. By Sir H. Davy.

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THEORY AND PRACTICE OF DRAINING AND EMBANKING. By John Johnston, Esq.

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BY JOHN B. IRVING, M. D.

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The subscriber having engaged the Agency for the sale of Poudrette, in New-York, and have executed such orders, as may be forwarded to him, (excluding the cost) at the New-York price, with the addition of the expenses incurred. In all other orders must be made, as the delivery of the article, without distinction of price.

March 28.

JOHN D. LEGARE, of New-York.

LIST OF PAYMENTS.

For 1842.
Dr. J. Moultrie,
Dr. Joshua Toomer.

For 1843.
P. C. Grimball,
John E. Boussena,
T. C. Coffin,
William Bold, Beaufort.

Nathaniel Heyward,
Charles Heyward,
W. C. M'Michael, Orangeburg.
Charles Alston,
Joseph T. Copps, Georgetown.
Major Charles Warley,
R. O. Anderson, Georgetown,
James H. Couper, Darin, Ga.
F. G. Fraser, Beaufort.

TO READERS AND CORRESPONDENTS.

This Number is issued with fewer Original Articles, than any of the previous numbers of this year. Our Correspondents having failed to furnish several articles promised. It contains, however, an article on the *Cultivation of Rice*, by Col. R. F. W. Allston, of Georgetown, which is republished from *the Planter*; it is highly recommended for its information. We hope the Number, in general, will be found interesting and useful to our Patrons.

Our delinquent Subscribers in the *South, and Southwestern States*, are reminded, that our *Printer and Paper-maker* must be paid, only through their liberality and punctuality.

THE MAGNET.

DEVOTED to the Investigation of Human Physiology, Physiognomy Cephalology, Pathology, Phrenology, Neurology, Psychology, Electricity, Galvanism, Magnetism, Light, Caloric, Life. By La Roy Sunderland.

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The Second Volume of this interesting Work, will be commenced June 1st, 1843. It will be issued in large octavo form, on New Type, and published Monthly, at \$2 a year, or 18 cents single, for the Proprietor, by **PETER P. GOOD,** 138 Fulton-street, New-York—where Subscriptions are received.

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All payments must be remitted free of Postage, and in Safety-fund money, or its equivalent, in this city.

Agents must give particular instructions as to the manner in which they may wish each number forwarded.

Every Editor who shall give this Prospectus (including this paragraph) six insertions, shall receive **THE MAGNET** for one year, from June, 1843, provided the papers containing this notice be forwarded, marked, to "The Magnet, New-York City;" and provided also, that these conditions be complied with before January, 1844.

July 1.